(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
30 November 2000 (30.11.2000)

PCT

(10) International Publication Number
WO 00/72431 A1

(51) International Patent Classification[7]: H02K 53/00

(21) International Application Number: PCT/KR00/00484

(22) International Filing Date: 18 May 2000 (18.05.2000)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:

1999/18411	21 May 1999 (21.05.1999)	KR
2000/1251	11 January 2000 (11.01.2000)	KR
2000/16724	30 March 2000 (30.03.2000)	KR

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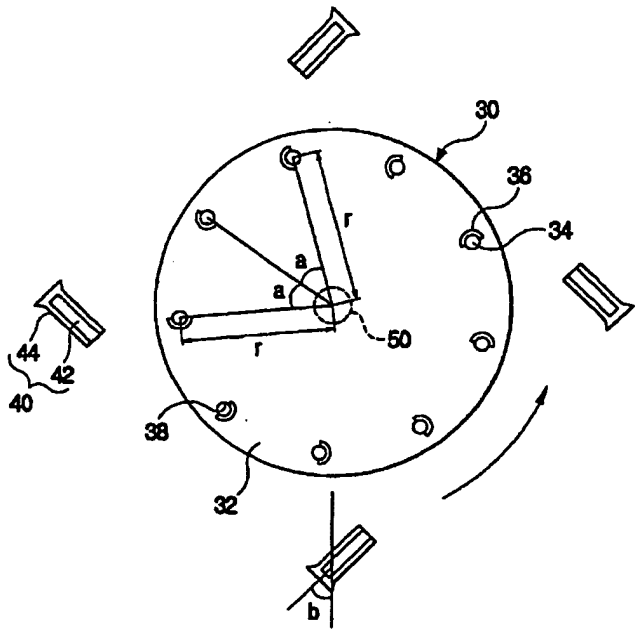
(81) Designated States *(national)*: AE, AL, AU, BA, BB, BG, BR, CA, CN, CR, CU, CZ, DM, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, TZ, UA, US, UZ, VN, YU, ZA.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *With international search report.*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MAGNETIC DYNAMO USING ROTATION PHENOMENON BY THE REPULSIVE FORCE OF PERMANENT MAGNET



(57) Abstract: A magnetoelectric generator inlcudes an electric energy generating unit. A rotation unit is fixedly connected to the electric energy generating unit from one side such that the rotation unit forms magnetic field in a direction opposite to the rotating direction thereof. A mechanical energy generating unit is connected to the electric energy generating unit from another side to generate mechanical energy for driving the electric energy generating unit and the rotation unit. An external magnetic force application unit faces the rotation unit while being spaced apart from the rotation unit with a predetermined distance such that the external magnetic energy application unit forms magnetic field in a direction opposite to the direction of the magnetic field of the rotation unit. Repulsive power is generated due to interaction in the magnetic fields between the rotation unit and the external magnetic force application unit while inducing a revolution phenomenon. The electric energy generating unit continuously generates electric energy by way of the revolution phenomenon without continual supplying of power from an external power supply.

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MAGNETIC DYNAMO USING ROTATION PHENOMENON BY THE REPULSIVE FORCE OF PERMANENT MAGNET

BACKGROUND OF THE INVENTION

(a) Field of the Invention

The present invention relates to a magnetic dynamo and, more particularly, to an electromagnetic generator which can continuously generate electric energy by way of a rotation or revolution phenomenon due to the magnetism-based repulsive power.

(b) Description of the Related Art

Generally, a generator receives mechanical energy from an external power supply, and converts it into electric energy. For instance, a hydraulic turbine, an electric motor, and a gasoline engine may be used for the external power supply. The external power supply may be based on water power generation, wind power generation, steam power generation, atomic power generation, or solar heat generation.

The basic principle of generation is focused at the interrelation between electric field and magnetic field in conductors. When magnetic flux is blocked at a conductor, voltage is induced to both ends of the conductor, and current flow occurs due to the induced voltage. The value of the induced voltage E is given by multiplying the magnetic flux density B by the length l of the conductor in the magnetic field, and the kinetic speed v of the conductor. That is, $E=Blv$.

However, such a power generation mechanism necessarily requires an external source of supplying power, and hence, power generation may stop unless mechanical energy is continuously supplied from the external power source. Furthermore, energy conversion efficiency drops due to energy loss occurring when the mechanical energy is converted into electric

energy via the generator.

In addition, such power generation systems involve serious environmental problems, exhaustion in natural resources, and several other problems in technical and geographical aspects.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a magnetoelectric generator which can continuously generate electric energy without continual supplying of power from an external power supply by way of a revolution phenomenon due to the magnetism-based repulsive power.

This and other objects may be achieved by a magnetoelectric generator with the following structure.

According to one aspect of the present invention, the magnetoelectric generator includes an electric energy generating unit. A rotation unit is fixedly connected to the electric energy generating unit from one side such that the rotation unit forms magnetic field in a direction opposite to the rotating direction thereof. A mechanical energy generating unit is connected to the electric energy generating unit from another side to generate mechanical energy for driving the electric energy generating unit and the rotation unit. An external magnetic force application unit faces the rotation unit while being spaced apart from the rotation unit with a predetermined distance such that the external magnetic energy application unit forms magnetic field in a direction opposite to the direction of the magnetic field of the rotation unit.

Repulsive power is generated due to interaction in the magnetic fields between the rotation unit and the external magnetic force application unit while inducing a revolution phenomenon. The electric energy generating unit continuously generates electric energy by way of the revolution phenomenon without continual supplying of power from an

external power supply.

The electric energy generating unit has a rotator with a rotating shaft. The mechanical energy generating unit is connected to the rotating shaft of the rotator in a direction, and the rotation unit being is connected to the rotating shaft of the rotator in an opposite direction.

According to another aspect of the present invention, the electromagnetic generator includes a rotation unit for forming magnetic field in a direction opposite to the rotating direction thereof. An electric energy generating unit is connected to the rotation unit from one side. A mechanical energy generating unit is connected to the rotation unit from another side to drive the electric energy generating unit and the rotation unit. An external magnetic force application unit faces the rotation unit while being spaced apart from the rotation unit with a predetermined distance such that the external magnetic energy application unit forms magnetic field in a direction opposite to the direction of the magnetic field of the rotation unit.

Repulsive power is generated due to interaction in the magnetic fields between the rotation unit and the external magnetic force application unit while inducing a revolution phenomenon. The electric energy generating unit continuously generates electric energy by way of the revolution phenomenon without continual supplying of power from an external power supply.

The electric energy generating unit and the mechanical energy generating unit are connected to each other via a rotating shaft while interposing the rotation unit between the electric energy generating unit and the mechanical energy generating unit. Alternatively, the electric energy generating unit and the mechanical energy generating unit may be connected to each other via pulleys and belts while interposing the rotation unit between the electric energy generating unit and the mechanical energy generating unit.

In the latter case, the rotating shaft passes through the center of the rotation unit, and the mechanical energy generating unit and the electric energy generating unit have rotating shafts proceeding parallel to the rotating shaft of the rotation unit. The rotating shafts of the mechanical energy generating unit and the electric energy generating unit proceed in directions opposite to each other. First pulleys are provided at both ends of the rotating shaft of the rotation unit, and second pulleys are provided at one-sided ends of the rotating shafts of the mechanical energy generating unit and the electric energy generating unit such that the second pulleys correspond to the first pulleys. The corresponding first and second pulleys are connected to each other via belts.

The above-structured electromagnetic generator may further include an external power supply connected to the mechanical energy generating unit via a switch to feed initial driving power to the mechanical energy generating unit, a first feeding line for feeding a part of the electric energy generated from the electric energy generating unit to the mechanical energy generating unit such that the mechanical energy generating unit is continuously driven after the initial driving power is fed to the mechanical energy generating unit and the switch is cut off, and a second feeding line for feeding the remaining energy to a load.

The electric energy generating unit may be an electric generator, and the mechanical energy generating unit may be a motor. The rotation unit may be a rotation plate. The rotation plate has a circular-shaped rotating body with a predetermined thickness, and a plurality of first permanent magnets provided at the periphery of the rotating body in a vertical manner. The external magnetic force application unit surrounds the periphery of the rotating body with a plurality of second permanent magnets. The second permanent magnets exert repulsive power against the first permanent magnets. The first permanent magnets are mounted at the rotating body

while being spaced apart from each other with a predetermined distance such that the first permanent magnets are kept to be distant from the rotating shaft of the rotating body with the same span. The external magnetic force application unit is positioned slightly below the rotation plate while surrounding the rotation plate such that the magnetic flux applied from the external magnetic force application unit to the rotation plate slightly deviates from the rotating shaft of the rotation plate.

The external magnetic force application unit is positioned around the rotating shaft of the rotating body with an inclination angle of 0-90° up and down, and an inclination angle of 0-45° left and right.

A magnetism-interception holder covers the outer periphery of each first permanent magnet such that the magnetism-interception holder weakens the repulsive power generated when the first permanent magnet approaches the external magnetic force application unit, and exerts repulsive power against the external magnetic force application unit when the first permanent magnet passes away from the external magnetic force application unit. The magnetism-interception holder is formed with a diamagnetic material.

An iron piece is attached to the external periphery of the second permanent magnet to reinforce magnetic force. The iron piece has a good magnetic conductivity.

The rotating body is formed with a diamagnetic material. The first and second permanent magnets are formed with rare earth metal-based magnets or superconducting material -based magnets. The electric generator and the motor are formed in a body with a superconducting material.

BRIEF DESCRIPTION OF THE DRAWINGS

A more complete appreciation of the invention, and many of the

attendant advantages thereof, will be readily apparent as the same becomes better understood by reference to the following detailed description when considered in conjunction with the accompanying drawings in which like reference symbols indicate the same or the similar components, wherein:

Fig. 1 is a block diagram of a magnetoelectric generator according to a preferred embodiment of the present invention;

Fig. 2 is a perspective view of the magnetoelectric generator shown in Fig. 1;

Fig. 3 is a plan view of the magnetoelectric generator shown in Fig. 1;

Fig. 4 is a perspective view of a magnet of a rotation plate for the magnetoeletric generator shown in Fig. 1;

Fig. 5 is a perspective view of an external magnetic force application unit for the magnetoelectric generator shown in Fig. 1;

Fig. 6 is a perspective view of a magnetoelectric generator according to a second preferred embodiment of the present invention;

Fig. 7 is a block diagram of a magnetoeletric generator according to a third preferred embodiment of the present invention; and

Fig. 8 is a perspective view of the magentoelectric generator shown in Fig. 7.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Preferred embodiments of this invention will be explained with reference to the accompanying drawings.

Fig. 1 is a block diagram of an electromagnetic generator according to a first preferred embodiment of the present invention. As shown in Fig. 1, the electromagnetic generator 100 includes an electric energy generating unit 10, a mechanical energy generating unit 20 connected to the electric energy generating unit 10 from one side via a rotation shaft 50, a rotation

unit 30 connected to the electric energy generating unit 10 from another side via the rotation shaft 50, and an external magnetic force application unit 40 for applying magnetic force to the rotation unit 30 such that the rotation unit 30 can be rotated around the rotation shaft 50 in a continuous manner.

An external power supplying unit 60 is connected to the mechanical energy generating unit 20 via a switch 62 to provide initial driving power thereto.

The electric energy generated from the electric energy generating unit 10 is fed to the mechanical energy generating unit 20 as well as to a load unit 90. The line for feeding the electric energy generated from the electric energy generating unit 10 to the mechanical energy generating unit 20 will be referred to as the "first feeding line" 12, and the line interconnecting the electric energy generating unit 10 and the load unit 90 referred to as the "second feeding line" 14.

In operation, the mechanical energy generating unit 20 receives initial driving power from the external power supplying unit 60, and transmits it to the electric energy generating unit 10 and the rotation unit 30. Thereafter, the switch 62 is cut off to thereby isolate the mechanical energy generating unit 20 from the external power supplying unit 60. However, since the rotation unit 30 is continuously rotated by way of the revolution phenomenon due to interaction in the magnetic fields between the rotation unit 30 and the external magnetic force application unit 40, the electric energy generating unit 10 can generate electric energy in a continuous manner.

Meanwhile, a part of the electric energy generated from the electric energy generating unit 10 makes feedback into the mechanical energy generating unit 20 via the first feeding line 12. The remaining electric energy is fed to the load unit 90 via the second feeding line 14 to operate the load unit 90 in a continuous manner. That is, the conventional electric

generator stops generating electric energy when the external power supply is intercepted, whereas the inventive electromagnetic generator 100 can continuously generate electric energy upon receipt of the initial driving power even though the mechanical energy generating unit 20 is intercepted from the external power supplying unit 60.

The external magnetic force application unit 40 makes the rotational force of the rotation unit 30 to be in a predetermined level, and makes the load applied to the mechanical energy generating unit 20 to be in a predetermined value or less.

The electromagnetic generator will be now described in a specified manner with reference to Figs. 2 and 3. Fig. 2 is a perspective view of the electromagnetic generator shown in Fig. 1, and Fig. 3 is a plan view of the electromagnetic generator.

As shown in the drawings, the electromagnetic generator 100 includes an electric generator 10 with a rotating shaft 50, a motor 20 connected to the rotating shaft 50 of the electric generator 10 from the bottom, and a rotation plate 30 connected to the rotating shaft 50 of the electric generator 10 from the top. A rectangular frame 70 externally surrounds the rotation plate 30 while fixedly supporting the electric generator 10, and external magnetic force application members 40 are positioned at four corner portions of the rectangular frame 70. The external magnetic force application members 40 are directed toward the rotation plate 30 from the side.

The electric generator 10 includes a rotator (not shown) that is rotated around the rotating shaft 50, and bears a basic structure well known in the art. The electric generator 10 may be based on a superconducting material.

The motor 20 receives operational power from an external power supply (not shown), and transmits it to the electric generator 10 such that it

can rotate in a predetermined speed. The motor 20 is supported at the bottom. Batteries and usual electric power sources may be used for the external power supply. Of course, the motor 20 may be operated manually. The motor 20 has a driving power amounting to about 60W. The motor 20 may be also based on a superconducting material.

The electric generator 10 and the motor 20 may be formed either in a separate manner or in a body.

The rotation plate 30 has a circular-shaped rotating body 32 with a predetermined thickness, and a plurality of first permanent magnets 34 placed at the periphery of the rotating body 32 in a vertical manner.

The external magnetic force application members 40 are provided each with a second permanent magnet 42 exerting repulsive power against the first permanent magnets 34. An iron piece 44 surrounds the second permanent magnet 42 to reinforce the magnetic force thereof. A metallic material having a good magnetic conductivity is preferably used for the iron piece 44.

The external magnetic force application members 40 make the rotation plate 30 to be fluently rotated by way of repulsive power working between the first permanent magnets 34 and the second permanent magnets 42. That is, as shown in Fig. 3, when it is intended to rotate the rotation plate 30 in the anti-clockwise direction, the first permanent magnets 34 are mounted at the rotating body 32 such that magnetic field is formed in the clockwise direction. The second permanent magnets 42 of the external magnetic force application members 40 face the first permanent magnets 34 such that the magnetic field thereof exerts repulsive power against the magnetic field of the first permanent magnets 34. That is, the external magnetic force application members 40 faces the rotation plate 30 in a slant manner such that the magnetic flux thereof proceeds in the anti-clockwise direction.

In order that the first permanent magnets 34 may form magnetic field in the clockwise direction, a first magnetism-interception holder 36 covers the outer periphery of each first permanent magnet 34 except the portion to be applied with the magnetic flux of the external magnetic force application members 40. The magnetism-interception holder 36 weakens the repulsive power generated when the first permanent magnet 34 approaches the second permanent magnets 42. That is, since the external magnetic force application members 40 apply the magnetic flux in the rotating direction of the rotation plate 30, they openly faces the external periphery of the first permanent magnets 34 passing away from them such that they exerts repulsive power, whereas they faces the magnetism-interception holder 36 covering the first permanent magnets 34 approaching thereto such that the repulsive power thereof can be minimized. In this way, the rotation plate 30 can be rotated in a continuous manner.

In order that the external magnetic force application members 40 may form magnetic field in the anti-clockwise direction, they are positioned in a slant manner with respect to the central axis of the rotation plate 30 such that the magnetic flux applied from the external magnetic force application members 40 to the rotation plate 30 slightly deviates from the central axis of the rotation plate 30. The external magnetic force application members 40 are placed slightly below the rotation plate 30 while surrounding it with an inclination angle of 0-90° up and down, and an inclination angle of 0-45° left and right. Of course, the poles of the first permanent magnet 34 and the second permanent magnet 42 close to each other are established to be the same.

Meanwhile, since the external magnetic force application members 40 are placed slightly below the rotation plate 30 while surrounding it, as shown in Fig. 4, the magnetism-interception holder 36 is structured to cover the entire surface of the first permanent magnet 34 except half of the lower

portion thereof. That is, when the first permanent magnets 34 fitted within the rotation plate 30 is rotated, the magnetism-interception holder 36 covers the other half of the lower portion of the first permanent magnet 34 approaching the second permanent magnet 42. The magnetism-interception holder 36 is to weaken the strength of the magnetic field of the first permanent magnet 34, and formed with a material having a good magnetism-interception capacity. For example, the magnetism-interception holder 36 may be formed with a diamagnetic material such as Bi, C, Si, Ag, Pb, Zn, S, and Cu. When the rotation plate 30 is rotated, repulsive power decreases while increasing the rotational force due to the magnetism-interception holder 36. The magnetism-interception holder 36 may be shaped with a semi-circle, but may be varied in shape depending upon the shape of magnets.

Referring to the rotation plate 30 in a further specified manner, the rotating body 32 thereof is formed with a diamagnetic material such as plastic, aluminum, or wood. A plurality of grooves 38 for mounting the first permanent magnets 34 thereon are arranged at the periphery thereof in a vertical manner. Particularly, the grooves 38 are kept to be distant from the rotating shaft 50 with the same span r while being spaced apart from each other with a predetermined distance a. For example, as shown in Fig. 3, in case nine grooves 38 are formed at the rotating body 32, they are positioned to be per 40° around the rotating shaft 50. That is, when n numbers of grooves are formed, the grooves 38 are positioned to be per 360° /n around the rotating shaft 50.

The first permanent magnet 34 fitted within each groove 38 is cylindrical-shaped, and partially covered by the magnetism-interception holder 36.

The external magnetic force application members 40 are positioned at the top corner portions of the frame 70 surrounding the rotation plate 30.

The corner portions of the frame 70 are spaced apart from the rotating shaft 50 with the same distance.

Of course, the frame 70 may be varied in shape, and the number of the external magnetic force application members 40 may be also varied provided that they are spaced apart from each other with a predetermined distance around the rotation plate 30.

The rotation plate 30 is a plastic-based circular plate with a diameter of about 25 ㎝ and a thickness of 5 ㎝. The first and second permanent magnets 34 and 42 are formed with rare earth metal-based Nd magnets having a diameter of about 20Ø. Meanwhile, the thickness of the rotating body 32 may be increased or decreased depending upon the capacity of the generator. The first and second permanent magnets 34 and 42 may be replaced by superconducting material-based magnets.

The number of the first permanent magnets 34 and the external magnetic force application members 40 may be increased or decreased at needs, or may be all even number or odd number.

In operation, the rotator of the electric generator 10 is rotated by receipt of mechanical energy from the external power supply via the motor 20 having a driving power of 60W. Accordingly, the rotation plate 30 fixedly connected to the rotating shaft 50 of the electric generator 10 is rotated. Thereafter, as the generator 10 outputs normal power of 3KW while being rotated at a constant speed, the motor 20 is intercepted from the external power supply. That is, when the rotation plate 30 is initially rotated, a revolution phenomenon occurs due to the repulsive force working between the first permanent magnets 34 and the second permanent magnets 42, and hence, the rotation plate 30 is rotated in a continuous manner. As the rotation plate 30 is continuously rotated, the electric generator 10 is operated without application of external power, and generates electric energy in a continuous manner.

The main part 60W of the power produced from the electric generator 10 makes feedback into the motor 20 via the first feeding line 12 to drive it. Accordingly, the motor 20 drives the electric generator 10 without receiving power from the external power supply. The remaining power of 2.94KW is fed into the load 90 via the second feeding line 14, and used to drive the load 90 in a continuous manner. Furthermore, since the rotation plate 30 rotates the rotator of the electric generator 10 by way of the revolution phenomenon, it takes a role of making the load applied to the motor 20 to be kept at a predetermined value or less.

However, when the rotation plate 30 is rotated, various types of loss including abrasion loss may occur. Even if such a loss is present, the magnetoelectric generator 100 can compensate for the loss due the rotational force of the rotation plate 30 in a sufficient manner, and continuously drive the rotation plate 30 in a constant r.p.m. In this way, the electric energy required for driving the load can be fed thereto in a continuous manner.

The rotation plate 30 may be rotated in the clockwise direction with appropriate variations such as change in the poles of the first permanent magnet and the external magnetic force application member.

Fig. 6 is a perspective view of a magnetoelectric generator 200 according to a second preferred embodiment of the present invention. In this preferred embodiment, other components and structures of the magnetoelectric generator 200 are the same as those related to the first preferred embodiment except that a motor 120 is placed above a rotation plate 130, and an electric generator 110 placed below the rotation plate 130. Of course, an external magnetic force application members 140 are provided around the rotation plate 130.

Fig. 7 schematically illustrates the structure of a magnetoelectric generator 300 according to a third preferred embodiment of the present

invention, and Fig. 8 is a perspective view of the magnetoelectric generator shown in Fig. 7. In this preferred embodiment, other components and structures of the magnetoelectric generator 300 are the same as those related to the second preferred embodiment except that a rotation plate 230 and an electric generator 210 as well as the rotation plate 230 and an electric motor 220 are connected to each other via pulleys 282 and belts 284. An external power supply 260 is connected to the motor 220 via a switch 262. External magnetic force application members 240 are arranged around the rotation plate 230 to apply magnetic force thereto. The electric energy generated from the electric generator 210 is fed to the motor 220 and a load 290.

Specifically speaking, a rotating shaft 232 passes through the rotation plate 230. Rotating shafts 212 and 222 are provided at the generator 210 and the motor 220 while proceeding parallel to the rotating shaft 232 of the rotation plate 230. The rotating shaft 222 of the motor 220 and the rotating shaft 212 of the generator 210 proceed in the directions opposite to each other. The pulleys 282 are provided at both ends of the rotating shaft 232 of the rotation plate 230, and at one sided ends of the rotating shafts 212 and 222 of the generator 210 and the motor 220. The pulleys 282 are connected to each other in a correspondence manner via the belts 284 to transmit driving power to the appropriate place.

Meanwhile, the operational procedures of the magnetoelectric generator 300 according to the third preferred embodiment are the same as those related to the previous preferred embodiments except that the driving power is transmitted through the pulleys 282 and the belts 284. That is, after the rotation plate 230 is rotated by receipt of driving power from the external power supply 260, the rotation plate 230 exerts continuous rotational force due to interaction between the rotation plate 230 and the external magnetic force application members 240. The electric generator

210 generates electric energy due to the rotational force of the rotation plate 230, and transmits it to the motor 220 and the load 290 in a continuous manner.

Of course, in the above preferred embodiments, the arrangement of the rotation plate, the motor, and the electric generator may be changed with appropriate variations in other relevant components at needs.

As described above, the inventive magnetoelectric generator can generate electric energy without continuous supplying of power from the external power supply, and may be employed for use in vehicles or factories requiring large amount of power through varying the number of permanent magnets and magnetic field strength thereof. Therefore, it can replace for other energy sources with advantages in economic and structural aspects. Furthermore, since the inventive magnetoelectric generator is based on magnetic force, environmental problems present in atomic power generation or steam power generation can be completely solved.

While the present invention has been described in detail with reference to the preferred embodiments, those skilled in the art will appreciate that various modifications and substitutions can be made thereto without departing from the spirit and scope of the present invention as set forth in the appended claims.

WHAT IS CLAIMED IS:

1. A magnetoelectric generator comprising:

an electric energy generating unit;

a rotation unit fixedly connected to the electric energy generating unit from one side such that the rotation unit forms magnetic field in a direction opposite to the rotating direction thereof;

a mechanical energy generating unit connected to the electric energy generating unit from another side to generate mechanical energy for driving the electric energy generating unit and the rotation unit; and

an external magnetic force application unit facing the rotation unit while being spaced apart from the rotation unit with a predetermined distance such that the external magnetic energy application unit forms magnetic field in a direction opposite to the direction of the magnetic field of the rotation unit;

wherein repulsive power is generated due to interaction in the magnetic fields between the rotation unit and the external magnetic force application unit while inducing a revolution phenomenon, and the electric energy generating unit continuously generates electric energy by way of the revolution phenomenon without continual supplying of power from an external power supply.

2. The electromagnetic generator of claim 1 wherein the electric energy generating unit comprises a rotator with a rotating shaft, the mechanical energy generating unit being connected to the rotating shaft of the rotator in a direction while the rotation unit being connected to the rotating shaft of the rotator in an opposite direction.

3. An electromagnetic generator comprising:

a rotation unit forming magnetic field in a direction opposite to the rotating direction thereof;

an electric energy generating unit connected to the rotation unit from

one side;

a mechanical energy generating unit connected to the rotation unit from another side to drive the electric energy generating unit and the rotation unit; and

an external magnetic force application unit facing the rotation unit while being spaced apart from the rotation unit with a predetermined distance such that the external magnetic energy application unit forms magnetic field in a direction opposite to the direction of the magnetic field of the rotation unit;

wherein repulsive power is generated due to interaction in the magnetic fields between the rotation unit and the external magnetic force application unit while inducing a revolution phenomenon, and the electric energy generating unit continuously generates electric energy by way of the revolution phenomenon without continual supplying of power from an external power supply.

4. The electromagnetic generator of claim 3 wherein the electric energy generating unit and the mechanical energy generating unit are connected to each other via a rotating shaft while interposing the rotation unit between the electric energy generating unit and the mechanical energy generating unit.

5. The electromagnetic generator of claim 3 wherein the electric energy generating unit and the mechanical energy generating unit are connected to each other via pulleys and belts while interposing the rotation unit between the electric energy generating unit and the mechanical energy generating unit.

6. The electromagnetic generator of claim 5 wherein the rotating shaft passes through the center of the rotation unit, the mechanical energy generating unit and the electric energy generating unit having rotating shafts proceeding parallel to the rotating shaft of the rotation unit, the rotating

shafts of the mechanical energy generating unit and the electric energy generating unit proceeding in directions opposite to each other, first pulleys being provided at both ends of the rotating shaft of the rotation unit, second pulleys being provided at one-sided ends of the rotating shafts of the mechanical energy generating unit and the electric energy generating unit such that the second pulleys correspond to the first pulleys, the corresponding first and second pulleys being connected to each other via belts.

7. The electromagnetic generator of claim 1 further comprising an external power supply connected to the mechanical energy generating unit via a switch to feed initial driving power to the mechanical energy generating unit.

8. The electromagnetic generator of claim 7 further comprising a first feeding line for feeding a part of the electric energy generated from the electric energy generating unit to the mechanical energy generating unit such that the mechanical energy generating unit is continuously driven after the initial driving power is fed to the mechanical energy generating unit and the switch is cut off, and a second feeding line for feeding the remaining energy to a load.

9. The electromagnetic generator of claim 1 wherein the electric energy generating unit is an electric generator, the mechanical energy generating unit being a motor, the rotation unit being a rotation plate.

10. The electromagnetic generator of claim 9 wherein the rotation plate comprises a circular-shaped rotating body with a predetermined thickness, and a plurality of first permanent magnets provided at the periphery of the rotating body in a vertical manner, the external magnetic force application unit surrounding the periphery of the rotating body with a plurality of second permanent magnets, the second permanent magnets exerting repulsive power against the first permanent magnets.

11. The electromagnetic generator of claim 10 wherein the first permanent magnets are mounted at the rotating body while being spaced apart from each other with a predetermined distance such that the first permanent magnets are kept to be distant from the rotating shaft of the rotating body with the same span, the external magnetic force application unit being positioned slightly below the rotation plate while surrounding the rotation plate such that the magnetic flux applied from the external magnetic force application unit to the rotation plate slightly deviates from the rotating shaft of the rotation plate.

12. The electromagnetic generator of claim 11 wherein the external magnetic force application unit is positioned around the rotating shaft of the rotating body with an inclination angle of 0-90° up and down, and an inclination angle of 0-45° left and right.

13. The electromagnetic generator of claim 11 wherein a magnetism-interception holder covers the outer periphery of each first permanent magnet such that the magnetism-interception holder weakens the repulsive power generated when the first permanent magnet approaches the external magnetic force application unit, and exerts repulsive power against the external magnetic force application unit when the first permanent magnet passes away from the external magnetic force application unit.

14. The electromagnetic generator of claim 13 wherein the magnetism-interception holder is formed with a diamagnetic material.

15. The electromagnetic generator of claim 10 wherein an iron piece is attached to the external periphery of the second permanent magnet to reinforce magnetic force.

16. The electromagnetic generator of claim 15 wherein the iron piece has a good magnetic conductivity.

17. The electromagnetic generator of claim 10 wherein the rotating body is formed with a diamagnetic material.

18. The electromagnetic generator of claim 10 wherein the first and second permanent magnets are formed with rare earth metal-based magnets or superconducting material -based magnets.

19. The electromagnetic generator of claim 9 wherein the electric generator and the motor are formed with a superconducting material.

20. The electromagnetic generator of claim 9 wherein the electric generator and the motor are formed in a body.

Fig.1

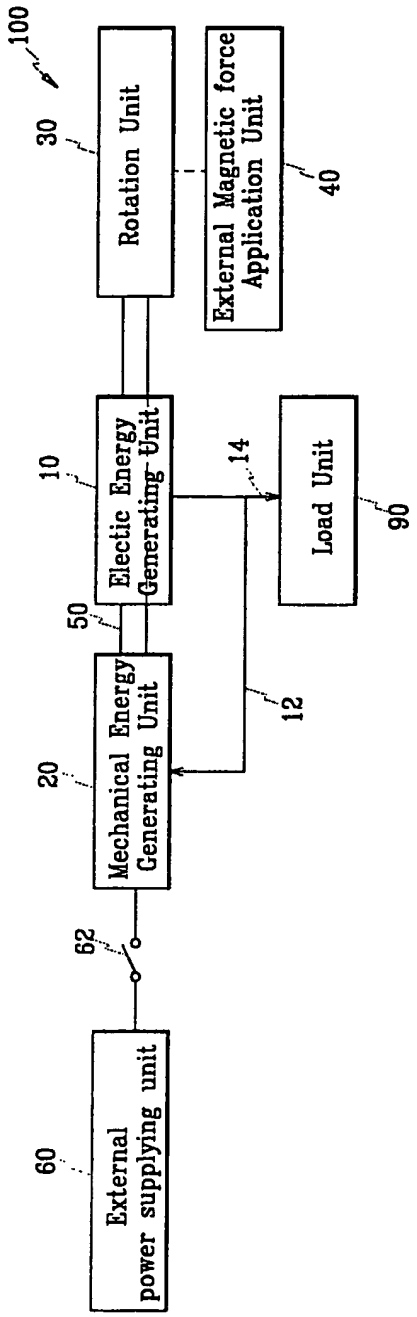

100
30
Rotation Unit
External Magnetic force Application Unit
40
10
Electic Energy Generating Unit
14
Load Unit
90
50
12
20
Mechanical Energy Generating Unit
62
60
External power supplying unit

Fig.2

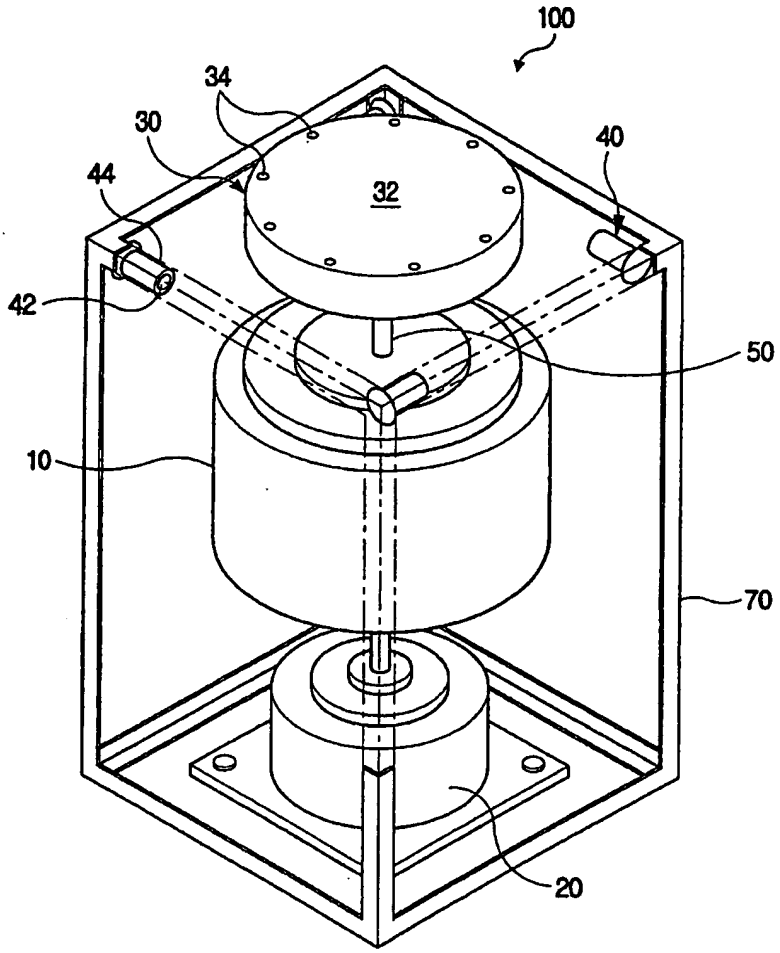


Fig.3

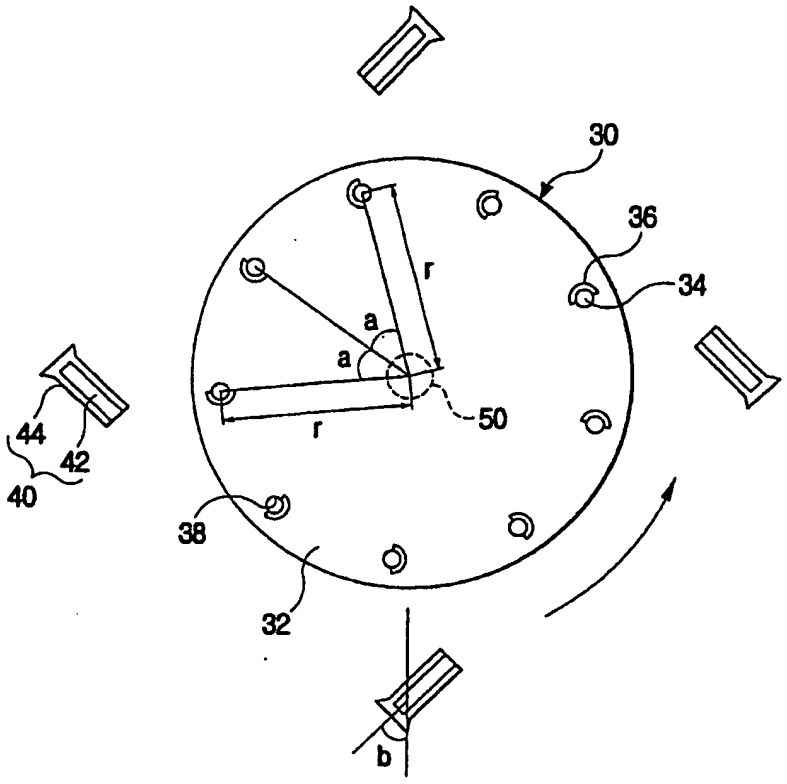


Fig.4

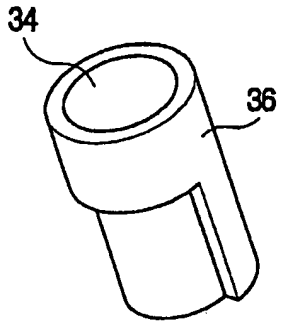


Fig.5

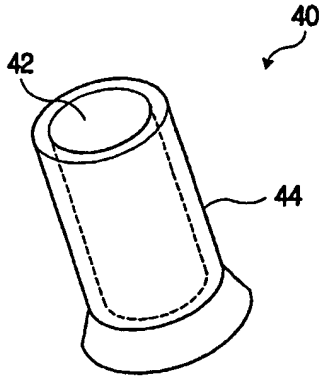


Fig.6

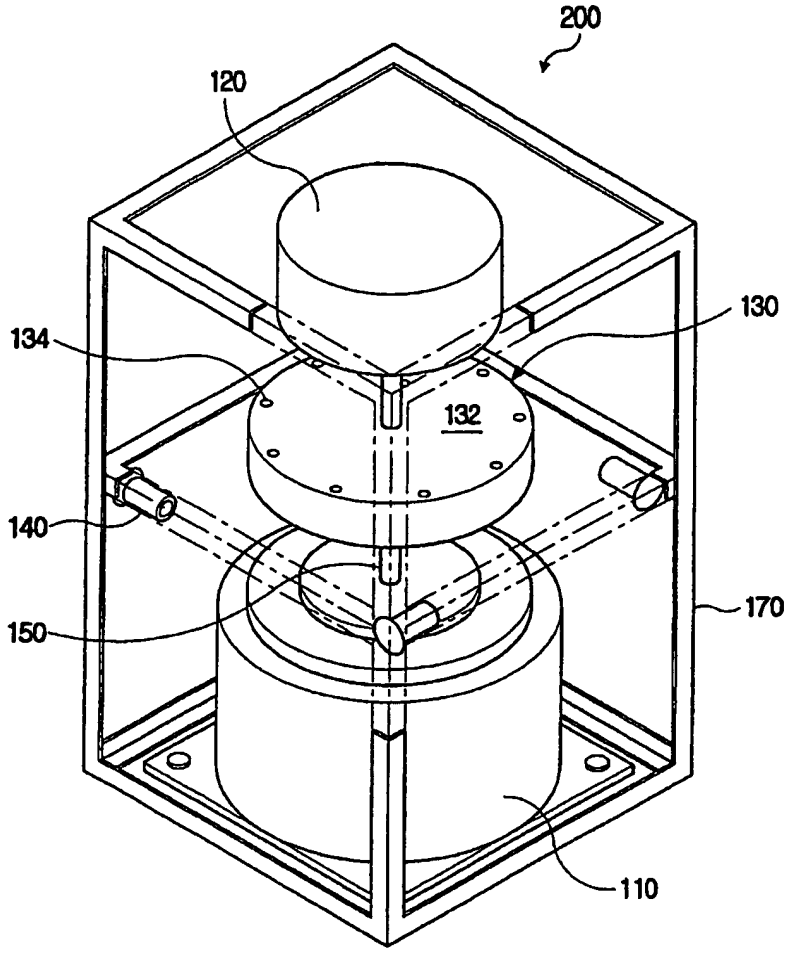


Fig.7

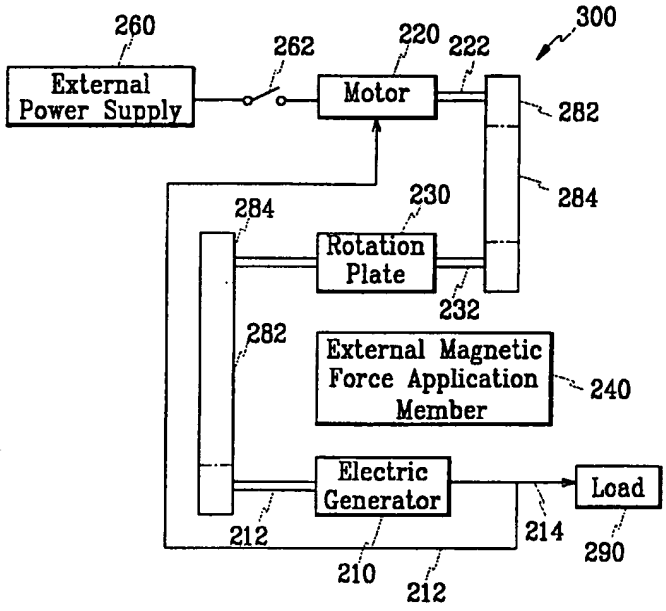
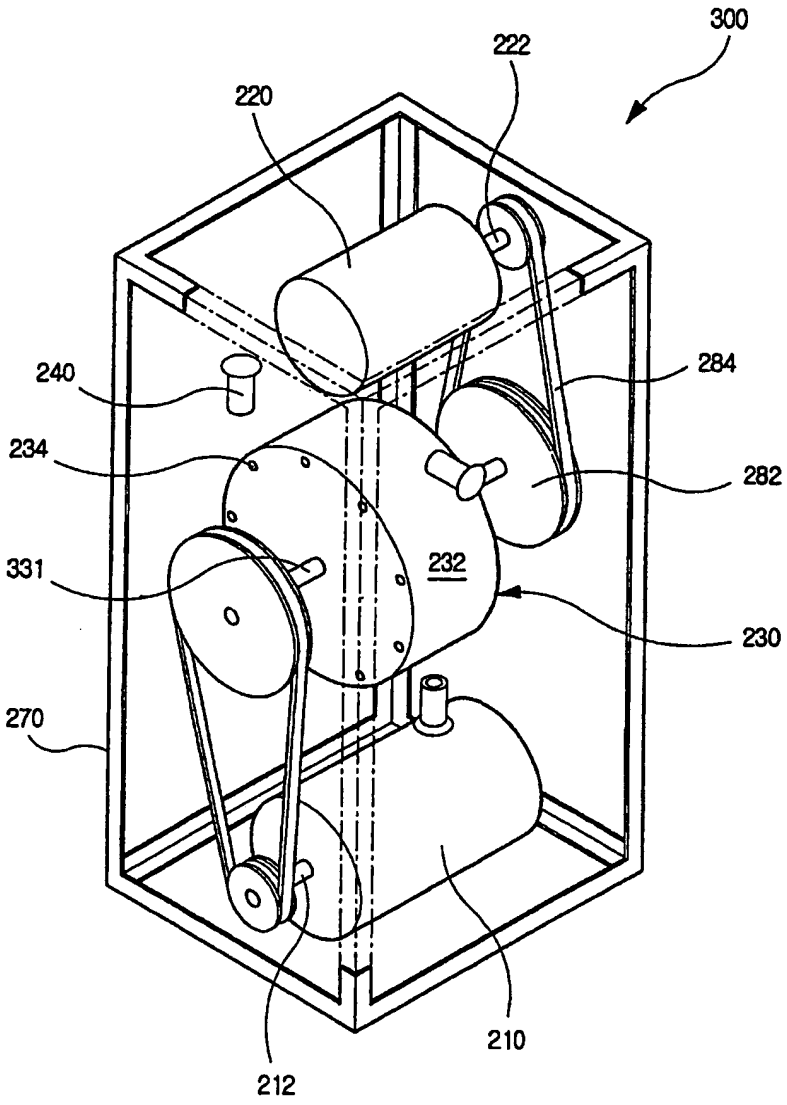

260
262
220
222
300
External Power Supply
Motor
282
284
230
284
Rotation Plate
232
282
External Magnetic Force Application Member
240
Electric Generator
Load
212
214
290
210
212

Fig.8



INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR00/00484

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 H02K 53/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimun documentation searched (classification system followed by classification symbols)
IPC7 H02K 53/00

Documentation searched other than minimun documentation to the extent that such documents are included in the fileds searched
KR : IPC as above

Electronic data base consulted during the intertnational search (name of data base and, where practicable, search trerms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 1-177859 A(YUKI TADAHIRO) 14 Jul. 1989(14. 07. 1989) The entire document	1,3
A	JP 61-269664 A(OBA SHINCHI) 29 Nov. 1986(29. 11. 1986) The entire document	1,3
A	JP 60-197156 A(KUBOTA MASANOBU) 5 Oct. 1985(05. 10. 1985) The entire document	1,3
A	JP 63-305745 A(KUBOTA HIROSHI) 13 Dec.1988(13. 12. 1988) The entire document	1,3
A	KR 1988-73693 A(HA, SEONG HWAN) 5 Nov. 1998(05. 11. 1998) The entire document	1,3

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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"Y" document of particular relevence; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents,such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
29 AUGUST 2000 (29.08.2000)	30 AUGUST 2000 (30.08.2000)

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